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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,026	01/16/2001	Ian Redmond	M-8535-2P US	8054
22442	7590	05/05/2005	EXAMINER	
SHERIDAN ROSS PC 1560 BROADWAY SUITE 1200 DENVER, CO 80202			BATTAGLIA, MICHAEL V	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/764,026	Applicant(s) REDMOND ET AL.	
	Examiner Michael V Battaglia	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 8, 11, 12, 16, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 is/are allowed.
- 6) ☒ Claim(s) 8, 11, 12, 16, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 18, 2005 has been entered.

***Claim Objections***

2. Claim 8 is objected to because of the following informality. On line 10 of claim 8, replacing "second optical element" with -beamshaper- is suggested to avoid improper antecedent basis issues. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 11, 12, 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimano et al (hereafter Shimano) (US 5,930,220) in view of Ngoi et al (hereafter Ngoi) (US 6,195,208).

In regard to claim 8, Shimano discloses an optical head apparatus for use in a read/write device comprising: an optical head substrate (Fig. 2, element that element 1 is inherently mounted

Art Unit: 2652

to or supported by); a light source (Fig. 2, element 1) positioned with respect to said optical head substrate; and a first optical element (Fig. 2, element 2) positioned along an optical path from said light source to an objective (Fig. 2, element 7). Shimano further discloses that the light source emits an elliptical light beam and that the optical head apparatus can be implemented with a beamshaper, wherein the beamshaper changes an ellipticity of a light beam transmitted by the light source along the optical path (Col. 6, lines 27-32 and 41-47). Shimano does not disclose that the optical head apparatus comprises a beamshaper in said optical path, wherein a virtual source point of said optical path when said beamshaper is provided is substantially the same as said virtual source point before said beamshaper is provided, and wherein the beamshaper changes an ellipticity of a light beam transmitted by the light source along the optical path. It is noted that the first optical element of Shimano has a collimating function.

Ngoi discloses a beamshaper (Figs. 2, 3 and 5, element 5) in an optical path, wherein a virtual source point (Figs. 2 and 4, element 1a) of said optical path when said beamshaper is provided is substantially the same as said virtual source point before said beamshaper is provided, and wherein the beamshaper changes an ellipticity of a light beam transmitted by a light source along the optical path (Figs. 2, 3 and 5 and Col. 2, lines 2-9 and Col. 5, lines 12-14). Ngoi discloses that the beamshaper is integrated with a first optical element (Fig. 2, elements 4 and 5a) that has a collimating function and that by doing so a reduction in the number of elements needed to shape and collimate the light beam, a decrease in the cost of manufacture, a reduction in weight, miniaturization and reduction in alignment difficulty are provided (Col. 2, lines 26-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the first optical element of Shimano with the integrated first optical element and beamshaper of Ngoi, the motivation being to provide the optical head apparatus of

Art Unit: 2652

Shimano with a beamshaper while maintaining the same number of elements, keeping cost of manufacture, size and weight low, and not increasing alignment difficulty.

In regard to claim 16, Shimano discloses an optical head apparatus for use in a read/write device comprising: an optical head substrate (Fig. 2, element that element 1 is inherently mounted to or supported by); a light source means (Fig. 2, element 1) for outputting light, positioned with respect to said optical head substrate; and a first optical means (Fig. 2, element 2) for modifying said light, positioned along an optical path from said light source means to an objective means (Fig. 2, element 7). Shimano further discloses that the light source emits an elliptical light beam and that the optical head apparatus can be implemented with a beamshaper for modifying an ellipticity of said light, wherein said beamshaper is positioned in said optical path (Col. 6, lines 27-32 and 41-47). Shimano does not disclose that the optical head apparatus comprises a beamshaper for modifying an ellipticity of said light, said beamshaper positioned in said optical path, wherein a value of a virtual source point of said optical path when said beamshaper is provided is substantially the same as a value of said virtual source point before said beamshaper is provided. It is noted that the first optical element of Shimano has a collimating function.

Ngoi discloses a beamshaper (Figs. 2, 3 and 5, element 5) for modifying an ellipticity of said light, said beamshaper positioned in said optical path, wherein a value of a virtual source point (Figs. 2 and 4, element 1a) of said optical path when said beamshaper is provided is substantially the same as a value of said virtual source point before said beamshaper is provided (Figs. 2, 3 and 5 and Col. 2, lines 2-9 and Col. 5, lines 12-14). Ngoi discloses that the beamshaper is integrated with a first optical element (Fig. 2, elements 4 and 5a) that has a collimating function and that by doing so a reduction in the number of elements needed to shape and collimate the light beam, a

Art Unit: 2652

decrease in the cost of manufacture, a reduction in weight, miniaturization and reduction in alignment difficulty are provided (Col. 2, lines 26-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the first optical element of Shimano with the integrated first optical element and beamshaper of Ngoi, the motivation being to provide the optical head apparatus of Shimano with a beamshaper while maintaining the same number of elements, keeping cost of manufacture, size and weight low, and not increasing alignment difficulty.

In regard to claims 11 and 19, Ngoi discloses that the beamshaper and first optical element are positioned on a single integral optical element unit (Fig. 3).

In regard to claims 12 and 20, Ngoi discloses that the first optical element is a non-beamshaper element (Fig. 2, elements 4 and 5a). It is noted that for these claims, Applicant's interpretation of a beamshaper (Page 7, lines 1-8 of Remarks filed July 26, 2004) is relied upon to define a non-beamshaper element.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 8, 11, 12, 16, 19 and 20 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references used to reject the claims (Shimano in view of Ngoi). On page 7 of Applicant's remarks filed March 18, 2004, Applicant argues that claims 8, 11, 12, 16, 19 and 20 are allowable over Kim and Lee because neither reference suggests or teaches a beamshaper in the optical path, wherein a virtual source point of said optical path when said beamshaper is provided is substantially the same as said virtual source point before said beamshaper is provided. However,

Art Unit: 2652

claims 8, 11, 12, 16, 19 and 20 are rejected over Shimano in view of Ngoi, which meets all of the limitations of the rejected claims (see rejections above). It is noted that the virtual source point of Ngoi (Figs. 2 and 4, element 1a) is the same before and after the beamshaper (Figs. 2, 3 and 5, element 5) is provided because the beamshaper does not affect the virtual source point (Figs. 2, 4 and 5). Thus the virtual source point would be the same regardless of whether or not the beamshaper is provided by integrating it with the collimator (Fig. 2, elements 4 and 5a).

#### ***Allowable Subject Matter***

5. Claims 1-3 are allowable over the prior art of record for the reasons specified in Applicant's remarks filed March 18, 2005.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (571) 272-7568. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

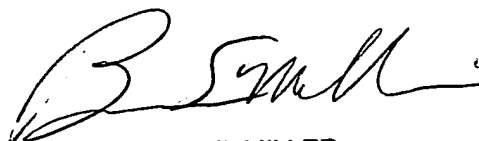
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Battaglia



BRIAN E. MILLER  
PRIMARY EXAMINER